Message

From: Shea, Valois [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A4217A71307D4429B7BDC7C80EB40C7D-SHEA, VALOIS]
Sent: 11/3/2016 7:21:49 PM
To: Brown, Ethan [Brown.Ethan@epa.gov]
Subject: RE: Dewey Burdock background concentrations

Thanks so much, Ethan!

Valois

Valois Shea
U.S. EPA Region 8
MailCode: 8WP-SUI
1595 Wynkoop Street
Denver, CO 80202-1129
Phone: (303) 312-6276
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Email: shea.valois@epa.gov

From: Razzazian, Christopher
Sent: Thursday, November 03, 2016 1:20 PM
To: Shea, Valois <Shea.Valois@epa.gov>
Cc: Brown, Ethan <Brown.Ethan@epa.gov>
Subject: Dewey Burdock background concentrations

Hi Valois, Please see the table updated by Ethan and use this. Note in the document that the modeling analysis used the backgrounds developed by NRC.

Note that the last row for SO2 should be in parts per billion (ppb) – that just got left out by accident.

Let us know if you have any questions!

Thanks Ethan and thanks Valois,

Chris

From: Brown, Ethan
Sent: Thursday, November 03, 2016 12:56 PM
To: Razzazian, Christopher <Razzazian.Christopher@epa.gov>
Subject: RE: Wind Cave

Chris,

Sorry, got a little busy this AM.

Upon closer inspection, the NO2 and SO2 numbers reported in the original EIS table do not appear to be valid. They were from incomplete years of data, so they really shouldn't have been presented the way they were. I decided to

replace the invalid values with the most recent valid values from the Badlands. The Badlands site, similar to Wind Cave, is a Class I area and is operated to determine background and transport. I assume the population density is much more similar to Wind Cave as well. Rapid City is the other option, but was sited to measure the air quality around the high population area at is designed to cover a neighborhood scale. I kept UC#1 there for CO, but updated it for the last valid value (2013). The only other option would be to get a current value from Sioux Falls as that is the only CO monitor currently operating in the state.

Let me know what you think.

Thanks,

Pollutant	Averaging Period	Form	Data Period	Value	Percent NAAQS	Location
Carbon Monoxide	1 hour	Not to be exceeded more than once per year	2013	0.6 ppm	2	UC #1
	8 hour	Not to be exceeded more than once per year	2013	0.3 ppm	3	UC #1
Nitrogen Dioxide	1 hour	98th percentile, averaged over 3 years	2013-2015	4 ppb	4	Badlands
	Annual	Annual Mean	2015	1 ppb	2	Badlands
Ozone	8 hour	Annual fourth highest daily maximum averaged over 3 years	2013-2015	59 ppb	84	Wind Cave
PM2.5	24 hour	98th percentile, averaged over 3 years	2013-2015	13 µg/m^3	37	Wind Cave
	Annual	Annual mean, averaged over 3 years	2013-2015	3.2 µg/m^3	27	Wind Cave
PM10	24 hour	Not to be exceeded more than once per year on average over 3 years	2013-2015	48 µg/m^3	32	Wind Cave
Sulfur Dioxide	1 hour	99th percentile of 1 hour daily max averaged over 3 years	2013- 2015	6	8	Badlands

From: Razzazian, Christopher
Sent: Thursday, November 03, 2016 10:36 AM
To: Brown, Ethan <Brown.Ethan@epa.gov>
Subject: RE: Wind Cave

Thanks Ethan,

I'm OK with using your judgement on what is most representative. So would you update anything or (PM/ozone), or leave as is?

Thanks so much, and sorry for the late reply, I ended up being out yesterday.

Chris

From: Brown, Ethan
Sent: Wednesday, November 02, 2016 2:07 PM
To: Razzazian, Christopher <Razzazian.Christopher@epa.gov>
Subject: RE: Wind Cave

Chris,

Ex. 5 Deliberative Process (DP)

Thanks,

Ethan Brown
Air Monitoring
EPA Region 8
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303-312-6403

From: Razzazian, Christopher
Sent: Tuesday, November 01, 2016 5:04 PM
To: Brown, Ethan <Brown.Ethan@epa.gov>
Cc: Shea, Valois <Shea.Valois@epa.gov>
Subject: RE: Wind Cave

Cool thanks. Pasted below is a screenshot of the table we have from the EIS for this. If that's the best info, we'll use that. If, in your judgement we could update any of it, then I think it makes sense for us to do that update.

Will catch you tomorrow.

Valois, FYI

Thanks, Ethan!

Chris

Table 3.7-3. Existing Conditions—Ambient Air Quality Monitoring Data

Pollutant*	Averaging Period	Form	2010 Value†*	Percent NAAQS‖	Location
Carbon monoxide	1 hour	Not to be exceeded more than once per year	0.960 ppm	3	UC#1 site in Union County‡
	8 hour	Not to be exceeded more than once per year	0.276 ppm	3	UC#1 site in Union County
Nitrogen Dioxide	1 hour	98th percentile, averaged over 3 years	3 ppb	3	Wind Cave
	Annual	Annual mean	0.2 ppb	0.4	Wind Cave
Ozone	8 hour	Annual fourth highest daily maximum averaged over 3 years	0.060 ppm	80	Wind Cave
$PM_{2.5}$	24 hour	98th percentile, averaged over 3 years	10.9 µg/m³§	31	Wind cave
	Annual	Annual mean, averaged over 3 years	4.8 µg/m³	32	Wind Cave
PM_{10}	24 hour	Not to be exceeded more than once per year on average over 3 years	41 µg/m³	57	Wind Cave
Sulfur dioxide	3 hour	Not to be exceeded more than once per year	0.008 ppm	2	Wind Cave
	1 hour	99th percentile of 1 hour daily max averaged over 3 years	6 ppb	8	Wind Cave

Source: Modified from IML (2013) for the PM_{10} baseline value and SDDENR (2011a) for the other values.
*Lead is currently not monitored for because of historically low levels in the state. The proposed Dewey-Burdock project is not considered to be a source for airborne lead.
†2010 values represent the appropriate value for NAAQS compliance as described in the "form" column, which in some cases is an average over a 3-year period of measured values. The 3 years of measurement data are not presented here, but are provided in the source document.
‡Wind Cave in Custer County, located 46.7 km [29 mi] from the proposed project area, does not collect carbon monoxide data. The UC#1 site, located in Union County in the southeastern portion of the state, is the only South Dakota station reporting carbon monoxide values in the South Dakota Ambient Air Monitoring Annual Network Plan 2011.
§To convert µg/m³ to oz/yd³, multiply by 2.7×10^{-8}.
‖NAAQS = National Ambient Air Quality Standards.

EPA has revised the NAAQS since the publication of the GEIS. The following information updates the NAAQS as documented in GEIS Table 3.2.8. The ozone 1-hour and sulfur dioxide annual standards are no longer applicable. Additionally, new or revised standards, not identified in GEIS Table 3.2.8, include a nitrogen dioxide 1-hour 100 ppb standard, an ozone 8-hour 0.075 ppm standard, a 2.5 µm particulate matter annual 12 µg/m³ standard, and a sulfur dioxide 1-hour 75 ppb standard. EPA has considered lowering the ozone standard from 0.075 ppm to 0.070 ppm (EPA, 2011). Table 3.7-4 contains the updated NAAQS. States may develop standards that are stricter or supplement the NAAQS. As described in ARSD 74:36:02:02, *Ambient Air Quality Standards*, South Dakota has not adopted stricter or supplemental standards.

As discussed in GEIS Section 3.4.6.2, EPA also established Prevention of Significant Deterioration (PSD) standards that set maximum allowable concentration increases for particulate matter, sulfur dioxide, and nitrogen dioxide pollutants above baseline conditions in attainment areas (NRC, 2009a). In part, the purpose of this requirement is to ensure that air

From: Brown, Ethan
Sent: Tuesday, November 01, 2016 4:27 PM
To: Razzazian, Christopher <Razzazian.Christopher@epa.gov>
Subject: Wind Cave

Chris,

Looks like the Wind Cave NO2 and SO2 monitoring ceased by 2011. There is 2010 data, but there is a large gap in the NO2 (June, July, August). Beyond that, the site has data for PM2.5, PM10, and Ozone.

Let's talk tomorrow and see how you want to proceed.

Ethan Brown
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